

Listing of Claims with claim amendments

Claims 1-20 (Canceled)

21. (New) A system for scanning an item in a scan volume, comprising

a light source generating a light beam along a beam path; a primary scan mirror disposed in said beam path for scanning said light beam over a scan angle in a first scan plane;

a secondary scan mirror dithering said light beam over an angle in a second scan plane perpendicular to said first scan plane, said primary scan mirror and said secondary scan mirror scanning the beam to produce a two dimensional scan pattern;

a detector;

a collection system for collecting return light from reflecting off the item, said collection system, wherein said return light is retrodirectively collected with respect to said primary scan mirror and non-retrodirectively collected with respect to and bypassing said secondary scan mirror.

22. (New) A system according to Claim 21 wherein said primary scan mirror comprises a facet wheel.

23. (New) A system according to Claim 21 wherein said collection system comprises a collection lens.

24. (New) A system according to Claim 21 wherein said collection system comprises one or more collection elements

selected from the group consisting of collection lenses, collection mirrors, and holographic elements.

25. (New) A system according to Claim 21 wherein said light source comprises a laser diode generating said light beam.

26. (New) A system according to Claim 21 further comprising

a plurality of pattern mirrors, wherein said primary scan mirror scans the light beam across said plurality of pattern mirrors.

27. (New) A system for scanning an item in a scan volume, comprising

a light source generating a light beam along a beam path;
a primary scan mechanism disposed in said beam path for scanning said light beam over a first scan angle in a first scan plane;

a secondary scan mechanism disposed in said beam path between said light source and said primary scan mechanism for scanning said light beam over an angle in a second scan plane different from said first scan plane;

a detector;

a collection system for collecting return light reflecting off the item and for focusing said return light toward said detector, wherein said return light is retrodirectively collected with respect to said primary scan mechanism and non-retrodirectively collected with respect to and bypassing said secondary scan mechanism.

28. (New) A system according to Claim 27 further comprising a controller for selectively activating or deactivating one or both said primary scan mechanism and said secondary scan mechanism.

29. (New) A system according to Claim 28 wherein said controller slowly moves the secondary scan mechanism to migrate a scan pattern through the scan volume.

30. (New) A method for scanning comprising the steps of generating a primary reading beam along first path toward a primary scan element;

scanning the primary reading beam with a first scan mechanism over a first scan angle and onto the primary scan element;

generating a first scan pattern by scanning the scanned primary reading beam with the primary scan element across a plurality of pattern mirrors and into a scan volume;

collecting return light from the primary reading beam reflecting off an object in the scan volume by (1) retrodirectively collecting off the primary scan element, (2) non-retrodirectively collecting relative to and bypassing the first scan mechanism, and (3) focusing the return light toward a first detector.

31. (New) A method according to Claim 30 wherein the step of focusing the return light comprises focusing with one or more collection elements selected from the group consisting of collection lenses, collection mirrors, and holographic elements.

32. (New) A method according to Claim 30 wherein the primary scan element comprises a facet wheel.

33. (New) A method according to Claim 30 further comprising slowly scanning the reading beam for migrating a scan pattern through the scan volume.

34. (New) A method according to Claim 30 further comprising

generating a second reading beam along second path toward the primary scan element;

scanning the second reading beam with a second scan mechanism over a second scan angle and onto the primary scan element;

generating a second scan pattern by scanning the scanned second reading beam with the primary scan element across a plurality of pattern mirrors and into the scan volume;

collecting return light from the second reading beam reflecting off an object in said scan volume by (1) retrodirectively collecting off said primary scan element, (2) non-retrodirectively collecting relative to and bypassing said second scan mechanism, and (3) focusing said return light toward a second detector.

35. (New) A system for scanning an item in a scan volume, comprising

a housing having at least one window;

a light source disposed in said housing and generating a light beam along a beam path;

a primary scanning mirror disposed in said housing and positioned in said beam path for scanning said light beam over a first scan angle in a first scan plane;

a secondary scanning mechanism disposed in said housing and positioned in said beam path between said light source and said primary scanning mirror for scanning said light beam over an angle in a second scan plane perpendicular to said first scan plane, said primary scanning mirror and said secondary scanning mechanism scanning the beam to produce a two dimensional scan pattern;

a detector;

a collection system for collecting return light from reflecting off the item and focusing said return light toward said detector;

a weigh platter and weigh scale incorporated into said housing;

a controller in communication with said weigh scale, wherein said controller selectively activates or deactivates a selected one of said primary scanning mirror and said secondary scanning mechanism depending upon whether an object is detected as being weighed on said weigh scale.

36. (New) A system according to Claim 35 wherein said return light is retrodirectively collected with respect to said primary scanning mirror and non-retrodirectively collected with respect to said secondary scanning mechanism.

37. (New) A system according to Claim 35 wherein said secondary scanning mechanism is activated upon detection of an object being weighed on said weigh scale.